

App. Serial No 10/524,981
Docket No.: NL030866 US

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Remarks

Claims 16-23 and 25-31 are currently pending in the patent application. For the reasons and arguments set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

In the instant Office Action dated April 25, 2007, claim 20 stands rejected under 35 U.S.C. § 112(2), claims 16-18 and 22 stand rejected under 35 U.S.C. § 102(b) over Nakao *et al.* (U.S. Patent No. 5,303,182); claims 16-20 and 22-23 stand rejected under 35 U.S.C. § 102(b) over Itoh *et al.* (U.S. Patent No. 5,965,942), or in the alternative, under 35 U.S.C. § 103(a) over Itoh; claim 21 is objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form.

In view of the potential allowability of claim 21, Applicant has added independent claim 25, which incorporates limitations of claim 21 and claim 16 from which claim 21 depends. Claims 26-31 depend from claim 25 and correspond to claims 17-20 and 22-23 respectively. Applicant submits that, as is consistent with the instant Office Action (*see* Allowable Subject Matter on page 7), claims 26-31 are in condition for allowance.

Regarding the Section 112(2) rejection of claim 20, antecedent basis for the limitation "the source or drain region of the field effect transistor" can be found in claim 16 at line 10. Thus, Applicant requests that the Section 112(2) rejection of claim 20 be withdrawn.

Applicant respectfully submits that the Section 102(b) rejection of claims 16-18 and 22 based upon the Nakao reference cannot stand because the cited portions of Nakao do not correspond to claim limitations directed to a conductive layer being provided on a source or drain region of a field effect transistor, the conductive layer being between the substrate and a ferroelectric material. The cited portions of the Nakao reference teach that conductor film 15 serves as both a gate electrode of the transistor and as a bottom electrode of a ferroelectric capacitor, with a ferroelectric film 16 formed on conductor film 15. *See, e.g.,* Figure 5 and Col. 5:19-23. Thus, Nakao's conductor film 15, on which ferroelectric film 16 is formed, is not provided on the source or the drain region as in the claimed invention. Accordingly, Applicant requests that the Section 102(b) rejection of claims 16-18 be withdrawn.

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Applicant respectfully submits that the Section 102(b) and Section 103(a) rejections of claims 16-20 and 22-23 based upon the Itoh reference cannot stand because the cited portions of Itoh do not correspond to claim limitations directed to a barrier layer being applied directly to the source or the drain region of a field effect transistor, with the conductive layer being applied directly to the barrier layer. The cited portions of the Itoh reference teach that a tantalum silicon nitride film 7 is formed as the diffusion barrier layer on the polysilicon plug 6, with a lower platinum electrode 8 being formed on film 7. See, e.g., Figure 1 and Col. 3:15-35. Thus, Itoh's film 7 is formed on plug 6, which makes contact with a source/drain region 4; film 7 is not applied directly to the source/drain region 4 as required by the claim limitations. Therefore, Applicant requests that the Section 102(b) and Section 103(a) rejections of claims 16-20 and 22-23 be withdrawn.

Applicant notes that on page 2 the instant Office Action indicates that claims 16-23 were elected in the reply filed on April 5, 2007 and that the claims 1-15 and 23 are withdrawn. Applicant submits that, as is consistent with the rest of the Office Action, the inclusion of claim 23 with the withdrawn claims is a typographic error, and that claim 24 should have been listed as withdrawn instead of claim 23.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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